CONFERENCE ON DISARMAMENT

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Ad hoc Verification: The Establishment of National Registers

In presenting its concept of ad hoc checks the delegation of the Federal Republic of Germany proposed the establishment of National Registers listing all relevant facilities of the chemical industry (cf. CD/869 of 6 September 1988). These registers to be provided by States parties to the Technical Secretariat were to serve as the basis for the selection of facilities to be inspected by ad hoc checks.

Detailed discussions on a possible ad hoc verification régime have subsequently taken place in Working Group 1 of the Ad hoc Committee on Chemical Weapons in the course of the spring part of the 1989 session of the Conference on Disarmament. These discussions also focused on the issue of National Registers and showed the need to further explore the conceptual approach to be taken in this regard.

With a view to providing a basis for further discussion the following concept of National Registers is suggested:

1. Purpose

National registers are to serve two purposes:

- First, National Registers will constitute a confidence-building measure as they are listing all relevant plant sites of the chemical industry world wide according to an agreed format.

- Second, National Registers will provide the declaration basis for the selection of facilities to be inspected by ad hoc verification measures.

The following discussion of the issue focusses solely on the latter purpose.

2. General considerations concerning National Registers as the declaration basis for ad hoc verification

Ad hoc verification measures are a complementary instrument their sole purpose being to verify on a routine basis whether, at the time of the check, substances listed in the Annex on Chemicals and not declared for facilities at the plantsite are being produced. As such they require - as the other routine verification measures of the Convention - a reliable declaration basis.

As National Registers are to serve this purpose, they have to be binding: In its National Register a State Party formally declares all relevant facilities of its chemical industry which will be subject to ad hoc verification measures.

Omissions and false information in the National Register will thus have to be considered as violations of declaration obligations. This notwithstanding it is understood that - in particular during the first years after the entry into force of the Convention - National Registers provided by States Parties may contain inaccuracies and unintentional omissions which will be due to technical difficulties in registering all relevant plantsites within a State in accordance with the proposed format. It is to be expected that also the other declaration obligations under Article VI might present some teething troubles, but that those will soon be overcome. Initial inaccuracies in National Registers will thus certainly not be considered serious breaches unless they prove to be intentional.

3. Requirements for National Registers

National Registers must be tailored to the purposes and needs of the inspection measure for which they provide the declaration basis. As ad hoc verification measures are to address the problem posed by the fact that existing facilities of the chemical industry can be misused for producing chemical weapons, National Registers are to provide a comprehensive picture of the relevant parts of the chemical industry. They have to list all facilities which can possibly be misused for the production of chemical weapons. As such a capability is hard to define unambiguously it is suggested that a broad approach be adopted. For this approach to be feasible and acceptable it has to be easily implementable by States Parties and at the same time it has to be ensured that confidential information is protected.

4. Suggested modalities for establishing National Registers

In order to meet the requirements described above the following approach to the establishment of National Registers is suggested:

- Each State Party shall provide to the Organization a National Register of its chemical industry.

- This register shall include all plantsites which produce discrete chemical compounds through technical processes based on chemical reaction(s), the total annual amount of this production exceeding [10] tonnes.

- Those plantsites which exclusively produce iron smelting products, cement, glass, ceramics shall not be subject to declaration (1).

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(1) Whether additional production areas are to be exempted from the declaration obligation needs further consideration.

Underlying the approach outlined in the three elements above is the basic criterion that only those plantsites shall be declared in the National Register that perform chemical reaction(s). For this purpose chemical reaction is defined as any transformation of chemicals where rearrangements of atoms, groups of atoms, ions or radicals of one or more substances (called basic or raw materials) result in the formation of new substances. Not included are physical processes such as crystallization, extraction, etc. Also not included are product formulation and mechanical processing of chemicals (2).

The plantsite is suggested to be the basic unit of registration in National Registers. The definition of this term as well as definitions of other pertinent organizational entities/structures in the chemical industry are set out in the Annex to this Working Paper.

5. Contents of the National Register

In order to enable a meaningful selection of plantsites to be inspected by ad hoc verification measures the National Registers should include information according to an agreed format. It is proposed that they include at least the following items:

- name of the plantsite and the owner, company or enterprise operating it,

- exact location of each plantsite

- main orientation of each plantsite

(2) As biochemical processes pose quite distinct verification problems, toxins are left out of consideration in this paper. It would seem that in general further in-depth consideration is needed as to how to cope with toxins in terms of verification.

- principal product groups (3) of each plantsite.

- size of overall annual production for each product group within ranges (10 to 100 tonnes, 100 to 1000 tonnes, 1000 to 10 000 tonnes, 10000 to 100 000 tonnes, above 100 000 tonnes).

6. Submission of National Registers

National Registers should be submitted by all States Parties [6] months after the entry into force of the Convention. Information to be provided under para. 5 should be updated annually at a fixed date (only changes as compared with the previous declaration to be reported).

7. National Registers and the conduct of ad hoc verification measures

Due to their non-intrusive character ad hoc verification measures provide for the possiblity of verifying a large number of facilities of a plantsite within a relatively short period of time. However, even if the plantsite is chosen as the basic unit of registration in the National Register, not all production facilities of a plantsite receiving an inspection in accordance with an ad hoc verification regime would be checked. Rather it could be envisaged that the inspection team, upon arrival at the site, would select one or more particular production facilities to be checked. In this way equality of obligations undertaken can be ensured (cf. different sizes of plantsites in different countries).

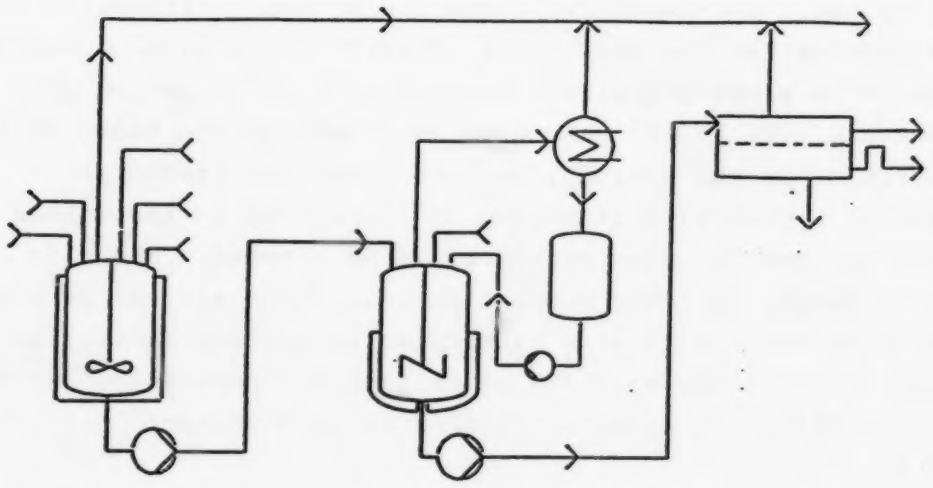
(3) Product groups could be pesticides, pharmaceuticals, dyes, pigments, etc. It needs to be discussed further what the categorization should look like also with regard to the requirement that the most relevant production/plantsites should be easily identifiable. In this regard it may e.g. be necessary to have "organophosphorous pesticides" as a separate product group.

A N N E X

The Definition of Facilities of the Chemical Industry

1. PLANT SECTION

A plant section for the manufacture of a chemical product ("product") is the means for operating individual process steps such as reaction, work-up, purification, etc. A process step can technically consist of



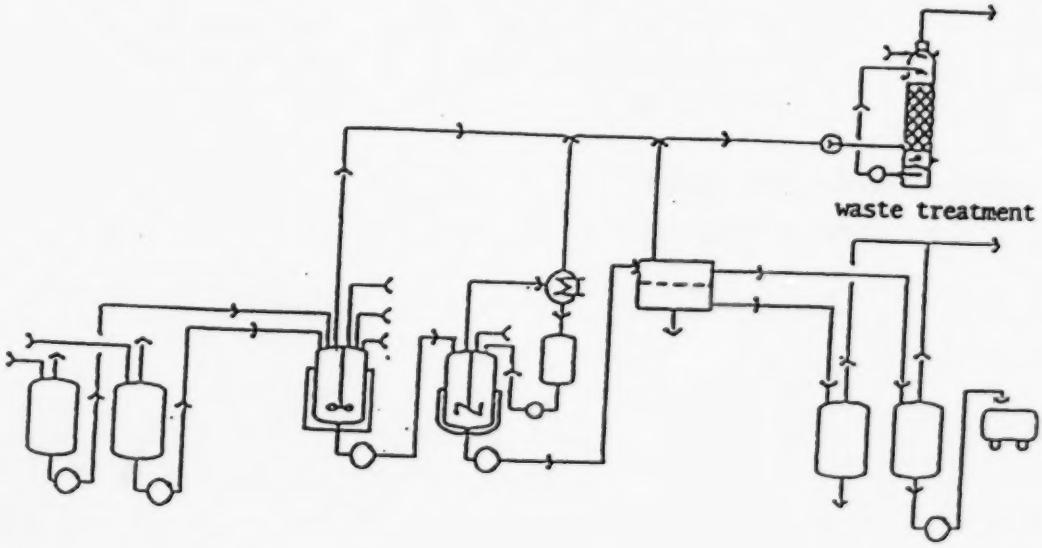
reaction work-up

several basic unit operations, i.e. the process step of purification can consist of the three unit operations crystallization, isolation and drying.

2. PRODUCTION PLANT

A production plant incorporates all necessary plant sections for the manufacture of a product such as reaction, work-up and purification. Also included are all necessary installations and equipment for process monitoring and control, tankfarm for raw materials, intermediates and final products and specific equipment for waste treatment.
Often the name of the product is used to identify a production plant, e.g. dialkylamin plant. Central installations serving several production plants such as central cooling systems and waste treatment, are not included in the definition of a production plant.

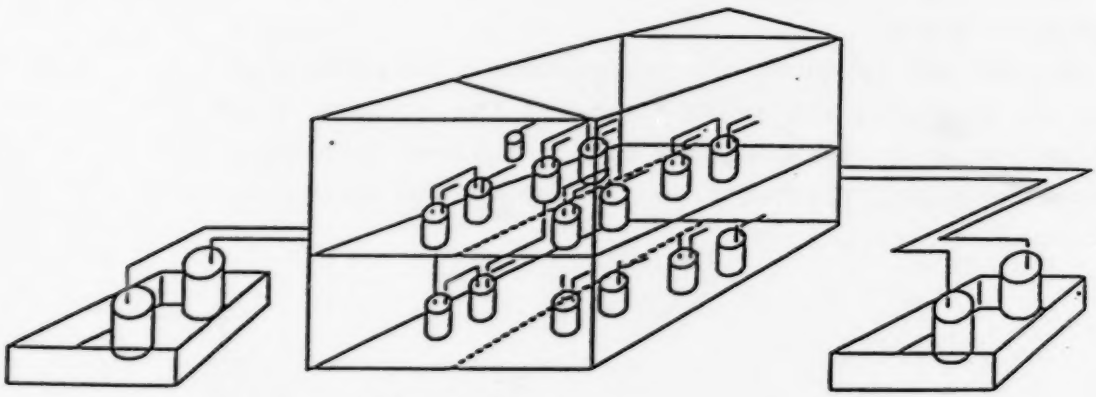
One main product or simultaneously several main products, resulting from one main reaction, can be produced in a production plant.
A different main product can be produced in a production plant by utilizing all or only some of the existing plant sections or by integrating new plant sections into the production plant. The reactions can be run batchwise or continuously.



tankfarm for raw materials | reaction | work-up | tankfarm for final product

3. PRODUCTION FACILITY

A production facility consists of independent or interrelated production plants including the necessary auxiliary plant, which are physically integrated in a production building or in an open steel structure.
The production plants, with regard to their products, can be operated independently, but have certain plant sections in common, such as specific waste treatment and tankfarms. They can also be linked in order to produce one final product.

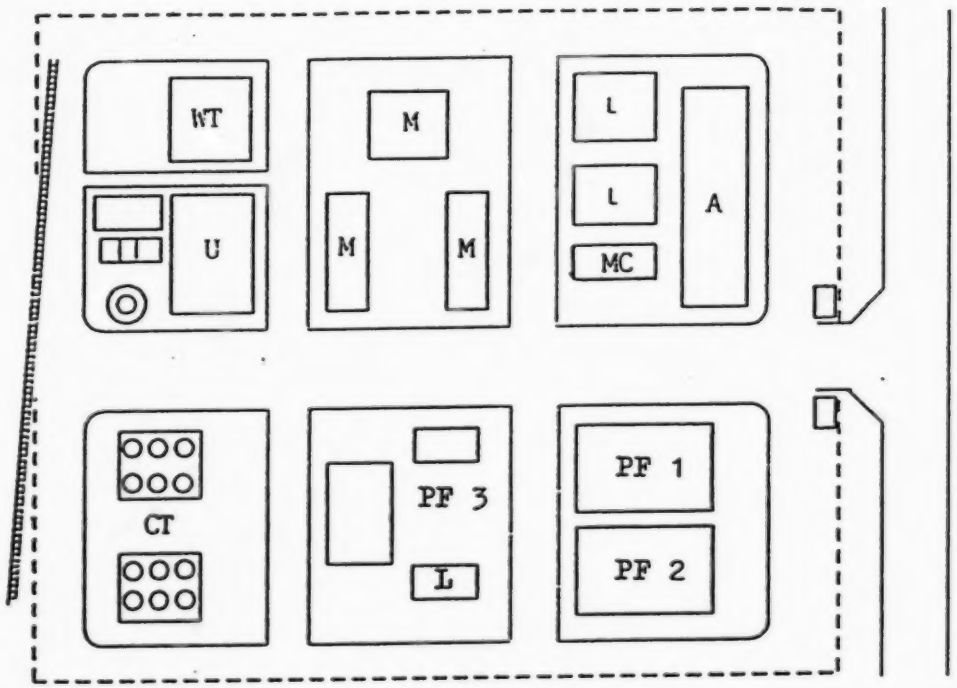


PP 1 PP 2

PP 1 = production plant 1
PP 2 = production plant 2

4. PLANTSITE

A plantsite is the local integration of one or more production facilities together with infrastructure, like maintenance shops, administration, medical center, central waste treatment plants and utility supplies.



PF 1 = production facility 1
PF 2 = production facility 2
PF 3 = production facility 3
M = maintenance shop
A = administration
MC = medical center
U = utility supply
WT = waste treatment
CT = central tankfarm
L = laboratories